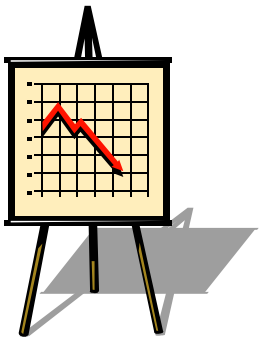


Michigan Department of Agriculture

Training Program for the Professional Food Service Sanitarian

Module 3: Risk Communication

Module 3 Table of Contents

Back To Main Menu

Introduction

Each day we are placed in situations where we must communicate hazards and risks associated with public-health issues. These situations may be as trivial as the need to maintain closed doors to a processing facility or as complex as communicating the intrinsic factors associated with Reduced Oxygen Packaging (ROP) of fish fillets. The inability to communicate effectively our intentions and knowledge can become the root cause of many conflicts and misunderstandings. Additionally, the process of communicating effectively can further be complicated when one is asked to communicate risks specifically associated with foods, processing, and the environment. Although effective communication may be perceived as an unreachable personal trait, it can be a realistic obtainable quality through training, exposure, and use of available media tools. Risk communication involves many factors, but the basics include the following:

- Discussing the rationale for being concerned about risk communication and public involvement.
- Teaching individuals about the various purposes of risk communication in order to actively involve the public productively in decision-making and to raise the level of public discussion about risks to the point where the nature and severity of the risk is generally understood. The discussion can focus on issues of values, the distribution of cost and benefits, etc.
- Teaching individuals about the various aspects of risk communication. The guiding principle of risk communication is an understanding of the Seven Cardinal Rules discussed later in this chapter.

Definition

The National Academy of Sciences defines risk communication as "an interactive process of exchange of information and opinion among individuals, groups, and institutions." A key element of this definition is that it is an exchange of information among parties, not just a one-way flow of information.

Risk communication embodies a two-way communication process that addresses the different perceptions of risk held by agency personnel and

their constituents. The public tends to focus on the “perception(s)" of risk, whereas experts and government tend to focus primarily on risk "assessment.” The public's perception is determined by two factors that vary in importance depending on how one is personally affected by a hazardous situation:

- The hazard: The likelihood that a chemical, microorganism, toxin, or situation presents a danger to the public or the environment.
- The outrage: The personal inequities, emotions, or concerns that the discovery of a hazard evokes.

Peter Sandman has combined these two factors of risks into a simple formula (Table 1). By identifying and predicting the results associated with descriptors under each of the public's fear versus outrage, one can identify the audiences' needs and prepare more effectively on the best communication technique to use (Tables 2 and 3).

Table 1
A Broader Definition Of Risk

Risk	=	Technical Risk Assessment	+	Non-Technical Public Concerns
or				
Risk	=	Hazard	+	Outrage

Source: Adapted from Peter Sandman, Rutgers University.

Table 2
Public Fears And Outrage

Voluntary	Involuntary
Natural	Manmade
Familiar	Exotic
Not memorable	Memorable
Common	Dread
Chronic	Catastrophic
Controlled by individual	Controlled by others
Fair	Unfair
Morally relevant	Morally irrelevant
Detectable	Undetectable
Visible	Not visible
Benefits	Benefits
Trusted source	Untrusted source

Source: Paul Slovic, Baruch Fishhoff, and Sarah Lichtenstein

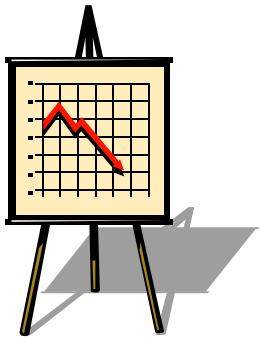
Peter Sandman's framework for analyzing public fears and outrage becomes more real for participants when you apply it to a real-life environmental issue. Below is a summary of an example Sandman has used.

EPA scientists say that radon poses a much greater threat to public health than most Superfund sites (hazardous waste dumpsites) do. Risk of developing lung cancer from radon can often be found in the one-in-one-hundred (lifetime exposure) range. Superfund sites generally pose a risk in the one-in-a-million range. Yet the public feels that Superfund sites present a far greater damage than radon does. Let's use Sandman's framework to explore this apparent discrepancy between fact and perception.

Table 3

Factor	Radon	Superfund
VOLUNTARY/INVOLUNTARY	+	-
People can decide whether to continue to allow radon in their homes. Superfund sites are imposed on them.		
NATURAL/MANMADE	+	-
Radon is naturally occurring. People caused Superfund sites.		
FAMILIAR/EXOTIC	+	-
Basements are familiar; Superfund sites are exotic.		
NOT MEMORABLE/MEMORABLE	+	-
No one has heard of radon. Superfund sites are infamous.		
COMMON/DREAD	-	-
Both are cancer-causing; both are dread.		
CHRONIC/CATASTROPHIC	-	-
Both are chronic based on long-term exposure.		
CONTROLLED BY INDIVIDUAL/CONTROLLED BY OTHERS	+	-
Individuals can control their exposure to radon, but they have no control over Superfund sites.		
FAIR/UNFAIR	+	-
Fairness is based on whether you get the benefits that go along with the risk. If you decide not to correct the radon problem in your home, you get the benefit as well as the risk. In a Superfund site you get the risk, and someone else gets the benefit.		
MORALLY IRRELEVANT/MORALLY RELEVANT	+	-
Superfund sites are evil. Radon is not.		
DETECTABLE/UNDETECTABLE	+	-
Radon can easily be detected by the individual. Superfund sites and their effect on drinking water and air quality cannot be.		
VISIBLE BENEFITS/NO VISIBLE BENERTS	-	-
There are no visible benefits from either.		
TRUSTED SOURCE/UNTRUSTED SOURCE	-	-
Radon information comes from a consultant paid for by the consumer. Superfund site information comes from the government.		
TOTAL	+6	-10

Forecasting Risk Communication Problems



Risk communication problems arise from four areas. These include (1) message problems (limitations of scientific risk assessments); (2) source problems (e.g., limitations of risk communicators and risk experts); (3) channel problems (e.g., limitations in the means or media by which scientific information about health or environmental risk is transmitted); and (4) receiver problems (e.g., characteristics of intended recipients of the communication).

Message Problems

- Deficiencies in scientific understanding, data, models, and methods resulting in large uncertainties in risk estimates
- Highly technical analyses that are often unintelligible to lay persons
- Sheer amount of complexity of analysis

Source Problems

- Lack of trust and credibility
  Disagreements among scientific experts
  Limited authority and resources for addressing risk problems
  Lack of data addressing the specific fears and concerns of individuals and communities
- Failure to disclose limitations of risk assessments and resulting uncertainties
- Limited understanding of interests, concerns, fears, values, priorities, and preferences of individual citizen and public groups
- Use of bureaucratic, legalistic, and technical language

Channel Problems

- Selective and biased media reporting that emphasizes drama, wrongdoing, disagreements, and conflict
- Premature disclosure of scientific information
- Oversimplifications, distortions, and inaccuracies in interpreting technical risk information

Receiver Problems

- Inaccurate perceptions of levels or risk
- Lack of interest in risk problems and technical complexities Overconfidence in one's ability to avoid harm
- Strong beliefs and opinions that are resistant to change
- Exaggerated expectations about the effectiveness of regulatory actions
- Desire and demand for scientific certainty
- Reluctance to make tradeoff between risk, cost, and benefits
- Difficulties in understanding probabilistic information related to unfamiliar technologies

Redefinition of Risk Communication

From the previous information, we can safely redefine risk communication as:

- Two-way process of “give and take”
- Active listening
- Showing compassion
- Using nontechnical language
- Being objective, open, and honest
- Recognizing the public has useful input that the Agency may not have considered
- Conveying risks in a larger context
- Giving clear information to the public
- Being considerate of the needs of your audience
- Practicing the Seven Cardinal Rules of Risk Communication.
- Your responsibility as an agency representative

Risk Communication **IS NOT:**

- Simply selling the agency decisions to the public
- Patronizing the public
- Co-opting the public
- Using jargon that people don't understand
- Listening passively without feedback
- A "firefighting" process
- Easy for many agency personnel.

Seven Cardinal Rules of Risk Communication

The foundation to good risk communication is a conscious understanding of the "Seven Cardinal Rules of Risk Communication." Dr. Vincent Covello developed these seven rules during the 1970s and 1980s to assist the U.S. Environmental Protection Agency (EPA) in its effort effectively to work with and inform the public on environmental issues and laws.

Rule 1: Accept and involve the public as a legitimate partner.

People and communities have a right to participate in decisions that affect their lives, their property, and the things they value. Involve the community early. Remember that as a government employee, you work for the public.

Point To Consider: The goal of risk communication should be to produce an informed public that is involved, interested, reasonable, thoughtful, solution-oriented, and collaborative; it should not be to diffuse public concerns or replace action.

Rule 2: Plan carefully, and evaluate your efforts.

Begin with clear, explicit objectives. Evaluate the information you have about the risks, and know its strengths and weaknesses. Identify the various groups in your audience, and aim your communications towards the specific groups. Train your staff, including technical staff, in communication skills. Pretest your messages. Evaluate your efforts, and learn from your mistakes.

Rule 3: Listen to the public's specific concerns.

Communication is a two-way activity (sender-receiver). Do not make assumptions about what people know, think, or want done about risks. Let all parties with an interest be heard. Identify with your audience, and try to put yourself in their place. Recognize emotion, hidden agendas, symbolic meanings, and broader economic or political considerations that underlie and complicate risk communication.

Point To Consider: People in the community are often more concerned about such issues as trust, credibility, competence, control, "voluntaryness," fairness, caring, and compassion than about mortality statistics and the details of quantitative risk assessment.

Rule 4: Be honest, frank, and open.

State your credentials, but do not ask or expect to be trusted. If you do not know the answer or are uncertain, say so. Get back to people with answers. Admit mistakes. Disclose risk information as soon as possible. Do not minimize or exaggerate the level of risk. Discuss data uncertainties, strengths, and weaknesses, including those identified by other credible sources.

Point To Consider: Trust and credibility are difficult to obtain. Once lost, they are almost impossible to regain completely.

Rule 5: Coordinate and collaborate with other credible sources.

Allies can be effective in helping communicate risk. Take time to coordinate all communications. Devote effort and resources to the slow, hard work of building bridges with other organizations. Determine who is best able to answer questions about risk. Try to issue communications jointly with other trustworthy sources.

Point To Consider: Few things make risk communication more difficult than conflicts or public disagreements with other credible sources.

Rule 6: Meet the needs of the media.

Be open and accessible to reporters. Respect their deadlines. Provide risk information tailored to the needs of each type of media. Prepare in advance and provide background material on complex risk issues. Do not hesitate to follow up on stories with praise or criticism. Try to establish long-term relationships of trust with specific editors and reporters.

Point To Consider: The media are frequently more interested in politics than in risk; more interested in simplicity than in complexity; more interested in danger than in safety.

Rule 7: Speak clearly and with compassion.

Technical language and jargon are useful as professional shorthand, but they are barriers to successful communication with the public. Use simple, non-technical language. Be sensitive to local norms, such as speech and dress. Use vivid concrete images that communicate on a personal level; use examples and anecdotes that make technical risk data come alive. Acknowledge and respond to the emotions that people express - anxiety, fear, anger, outrage, helplessness. Acknowledge and respond to the distinction that public views as important in evaluating risk. Use risk comparisons to help put risk in perspective, but avoid comparisons that

ignore distinctions that people consider important. Tell people what you cannot do. Promise only what you can do. Do what you promise.

Point to consider: Never let your efforts to inform people about risks prevent you from acknowledging, and saying, that any illness, injury, or death is a tragedy.

Five Most Frequent Interview Failures

There may be times when you are asked to communicate risk through a member of the media. Regardless of the type of media--printed, recorded, live, or audio--the interviewee may fail to adequately prepare responses, which may lead to misquotes, misrepresentation of the agency, and personal embarrassment. Here are five areas where interviewees need to be aware of:

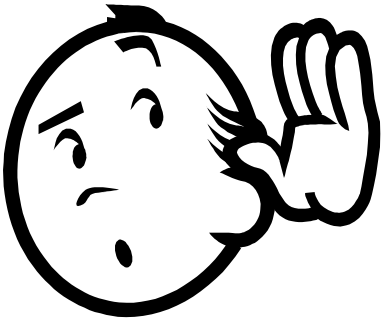
- Failure to take charge. The spokesperson must be a leader. His/her role is not just to answer questions, but to disseminate information.
- Failure to anticipate questions. Don't just concentrate on assembling the factual details. Prepare for obvious questions. Remember that the public wants to know, "is it safe?"
- Failure to develop key message. This is your opportunity to communicate with the public. Make sure you can take advantage of it by having your organization's message prepared and ready for use.
- Failure to stick to the facts. Speculating or answering hypothetical questions can get you into trouble. Avoid what if questions by confining you answers to what is known.
- Failure to keep calm. By not letting questions get under your skin, you will show a willingness to cooperate with courteous journalists and convey an impression of candor. Keep cool.

Ten Reasons to Release Information Early

There are many discussions, as well as decisions, made about when to release information early. This communication process is dependent, in large part, on the situation and the agency's policies. However, agencies should seriously examine the implications of holding onto information. The next time your agency and yourself contemplate whether to make information public, consider some of the reasons to release information early:

- People are entitled to information that affects their lives.
- Early release of information sets the pace for resolution of the problem.
- If you wait, the story may leak anyway. When it does, you are apt to lose trust and credibility.
- You can better control the accuracy of information if you are the first to present it.
- There is more likely to be time for meaningful public involvement in decision-making if the information is released promptly.
- Prompt release of information about one situation may prevent similar situations elsewhere.
- Less work is required to release information early than to respond to inquiries, attack, etc., that might result from delayed release.
- You are more apt to earn public trust if you release information promptly.
- If you wait, people may feel angry and resentful about not learning of the information earlier.
- People are more likely to overestimate the risk if you hold on to information.

Listening Skills



Risk communication incorporates effective listening. Remember that if the conversation is only one-way, the receiver may feel that his message is of little value or importance, and thus will view the sender's message with similar or less than value. In Improving Dialogue With Communities: A Short Guide for Government Risk Communication, Eastwood Atwater describes some important "Dos and Don'ts of Listening." In a crisis situation, you will be faced with several different audiences requiring your attention and ability to really "hear" what they are saying.

Here are some suggestions for improving your listening skills, but be reminded that mastery of these skills requires repeated practice.

When listening, try to do the following:

Become aware of your own listening habits. What are your strong points? What are your faults? Do you judge people too quickly? Do you interrupt too often? A better awareness of your listening habits is the first stage in changing them.

- Share responsibility for the communication. Remember that it takes two to communicate: one to talk and one to listen, with each person alternating as the listener. Whenever you are unclear about what a speaker is saying, it is your responsibility to let the speaker know this, either by asking for clarification or actively reflecting what you heard and asking to be corrected.

- Be physically attentive. Face the speaker. Maintain appropriate eye contact. Make certain your posture and gestures show you are listening. Sit or stand at a distance which puts you and the speaker at ease. Remember that the one who is speaking wants an attentive, animated listener, not a stone wall.

- Concentrate on what the speaker is saying. Be alert for wandering thoughts. Being physically and verbally responsive will probably help you concentrate on what the speaker is saying.

- Listen for the total meaning, including feelings as well as information. Remember that people communicate their attitudes and feelings coded in socially acceptable ways. Listen for the feelings as well as the content.

- Observe the speaker's non-verbal signals. Watch the speaker's facial expressions, and how much he or she gazes and makes eye contact with you. Listen to the speaker's tone of voice and rate of speech. Does the speaker's body language reinforce or contradict the spoken words?

- Adopt an accepting attitude toward the speaker. An accepting attitude on the listener's part creates a favorable atmosphere for communication. The more speakers feel accepted, the more they can let down their guard and express what they really want to say. Any negative attitude on the listener's part tends to make a speaker feel defensive, insecure, and more guarded in communication.

- Express empathetic understanding. Use active, reflective listening skills to discover how other people feel, and what they are really trying to say in terms of their own frame of reference.

- Listen to yourself. When you recognize the feelings stimulated in you by another's message, and can express those feelings, this clears the air and helps you to listen better.

- "Close the loop" of listening by taking appropriate action. Remember that people often speak with the purpose of getting something tangible done--to obtain information, to change your opinion, to get you to do something. The acid test of listening is how well you respond to the speaker's message with an appropriate action. In listening, actions speak louder than words.

While emphasis should be on positive suggestions for improving listening habits, it is helpful to keep in mind some of the pitfalls of listening. Consequently, in listening, don't do the following:

- Don't mistake not talking for listening. People who remain silent aren't necessarily listening. They may be preoccupied with their own thought. On the other hand, people can talk a lot and still process information and listen quite well.

- Don't fake listening. Whenever you try to fake listening, your disinterest or boredom inevitably shows up in your facial expressions or body language.

- Don't interrupt needlessly. People in positions of power tend to interrupt more often than those not in power without realizing it. If you must interrupt someone in a serous conversation, try to follow with a retrieval--helping the speaker to re-establish the train of thought.

- Don't pass judgement too quickly. Judgmental remarks invariably put others on the defensive, serving as barriers to effective communication.

- Don't make arguing an "ego-trip." Even if you argue only “mentally" with what the speaker is saying, you tend to stop listening and look forward to your turn to talk. When you begin to argue verbally, you become so preoccupied with justifying your own views that you often fail to hear the others viewpoint. When you honestly disagree, you need to listen carefully in order to understand what you are disagreeing with. Then state your point of view.

- Don't ask too many questions. Closed questions that require a definite answer should be kept to a minimum. Even open questions that encourage a speaker to elaborate on a point should be used with caution. Too many questions have a way of shifting control of the conversation to the listener, putting the speaker on the defensive.

- Don't ever tell a speaker 'I know exactly how you feel." This remark serves more to justify your own efforts than to convince someone you are really listening. In the first place, it is difficult to know just how another person feels. Then too, such a generalized remark is likely to distract the speaker from further efforts at self expression, as well as cast doubt on your own credibility as a listener. It is usually more effective to demonstrate you have heard with a reflective, empathetic response such as "I sense that you are feeling disappointed," or "I get the impression you are angry about this."

- Don't overreact to emotional words. Be careful no to let yourself get so caught up in the speakers outburst of feelings that you miss the content of his or her message. Be alert for loaded words and expressions, but listen also for the message that comes with them. Your own feelings can block your understanding of something you may really need to hear.

- Don't give advice unless it is requested. Even when someone asks your advice, it is better to use reflective listening skills to determine what that person wants to know.

- Don't use listening as a way of hiding yourself. People may use the appearance of listening as a way of avoiding emotional involvement and real communication. The "listener" who uses silence as a personal

retreat is inadvertently preventing effective communication, rather than furthering it.

Summary

The driving force behind effective risk communication is being able to answer "Is this food safe for consumption?" and "How safe am I?" The only two answers to these questions are "Yes" or "No", no "Maybes." The purpose of conducting risk communication is to understand how to advise the public "Yes, the food is safe" or "No, this product/process is not safe". Risk communication is not to allay the public's concerns or merely help them see your point of view. It is a means by which the agency can advise the public on health risk assessment information, involve them in risk management and allow the public to better determine actions they must take to protect their interest and health.

One must remember that there is no single public. Rather, for any given problem, there are many affected parties, including, but not limited to, the regulated community, individuals living near the source, environmentalists, and elected officials who may, depending on the circumstances, have very different views on what should be done to resolve the problem.

References and Resources

American Chemical Society. 1988. Chemical Risk Communication. Washington, DC.

Arkin, Elaine Bratic. 1989. Making Health Communication Programs Work. National Cancer Institute, NIH.

Covello, Vincent T., David B. McCallum, Maria Pavlova (eds.) 1987. Effective Risk Communication. New York & London: Plenum Press.

Covello, Vincent T., and Frederick W. Allen. 1988. Seven Cardinal Rules of Risk Communication. Washington, DC. U.S. EPA.

Creighton, James L. 1981. The Public Involvement Manual. Cambridge, MA Abt Books.

Davies, J. Clarence, Vincent T. Covello and Frederick W. Allen (eds.) 1987. Risk Communication: Proceedings of the National Conference on Risk Communication. Washington, DC. The Conservation Foundation.

Fischoff, Baruch, S. Lichtenstein, Paul Slovic, S. Derby, R. Keeney. 1981. Acceptable Risk. Cambridge, MA Cambridge University Press.

Fisher, Ann, Maria Pavlova, Vincent Covello (eds.) 1991. Evaluation and Effective Risk communication: Workshop Proceedings (Interagency Task Force on Environmental Cancer and Lung Disease). Washington, DC. Interagency

Hance, Billie Jo, Caron Chess and Peter Sandman. 1988. Improving Dialogue with Communities: A Risk Communication Manual for Government. Washington, DC. U.S. EPA.

Johnson, Branden B. and Vincent T. Covello. 1987. The Social and Cultural Construction of Risk. Dordrecht/Boston/Lancaster/Tokyo. D. Reidel Publishing Co., Member Kluwer Academic-Publishing Group.

Krimsky, Sheldon, and Alonzo Plough. 1988. Environmental Hazards, Communication Risks as a Social Process. Dover MA. Auburn House Publishing Co.

National Research Council Commission/National Academy of Sciences. 1989. Improving-Risk Communication. Washington, DC. National Academy Press.

Sandman, Peter. VHS Videotape Risk = Hazard + Outrage: A Formula for Effective Risk-Communication. American Industrial Hygiene Association, 2700 Prosperity Ave., Suite 250, Fairfax, VA 22031. TELE (703) 849-8888